

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A scanning method for operating a scanning apparatus for optical density measurement and/or color or spectral measurement of at least one measurement object arranged on a printing medium, the at least one measurement object comprising measurement strips and the printing medium comprising a printing or paper web, the method comprising the steps of:

detecting, during a printing process, a position of a reference object on the printing medium, the reference object being arranged ahead of the at least one measurement object relative to a travel direction of the printing medium; and

scanning, during the printing process, the at least one measurement object with a at least one sensor means based on the detection of the reference object in said step of detecting and a relative position of the measurement object with respect to the detected position of the reference object, said at least one sensor detecting information from the at least one measurement object indicating at least one of optical density and color or spectral values of the at least one measurement object.

2. (currently amended) The scanning method according to claim 1, wherein said step of scanning including moving the at least one sensor means is moved in a translational movement transverse to the travel direction of the printing medium thereof to scan said the at

least one measurement object, the movement of the at least one sensor means ~~movement~~ being activated responsive to a detection of the reference object, said at least one sensor detecting information from the at least one measurement object indicating at least one of optical density and/or color or spectral values of the at least one measurement object.

3. (currently amended) The scanning method according to claim 2, wherein the printing medium is carried on a roll, said method further comprising the step of measuring and storing, at an instant of detection of the reference object, a corresponding angle ϕ of rotation of said the roll being measured and stored.

4. (currently amended) The scanning method according to claim 3, ~~wherein~~ further comprising the step of calculating an angle-of-rotation increment is calculated based on a diameter of said roll, the measured angle ϕ of rotation and a predetermined distance running in a printing medium transport direction between the reference object and the measurement object, said step of scanning being performed ~~the measurement object being scanned~~ when said roll has rotated said angle increment.

5. (currently amended) The scanning method according to claim 1, wherein said step of scanning ~~which~~ is activated with a time delay relative to an instant of detection of the reference object, is said step of scanning being triggered in accordance with a currently determined printing medium speed and a predetermined distance running in a printing medium transport direction between the reference object and the measurement object.

6. (currently amended) A scanning apparatus for optical density measurement and/or color or spectral measurement of a at least one measurement object arranged on a printing medium, comprising:

a sensor device means, said sensor means including a plurality of measurement heads arranged in a printing machine, said printing medium having a detection reference object arranged thereon at a predetermined distance running in a printing medium transport direction ~~from~~ ahead of said at least one measurement object, wherein said at least one measurement object is a longitudinal measurement strip disposed along a coordinate direction approximately transversely of the printing medium transport direction, at least one of said measurement heads being operative to detect said reference object during a printing process, remainder ones of said measurement heads being activatable to detect and scan said at least one measurement object during the printing process, said remainder ones of measurement heads being activated responsive to said reference object detection and being arranged and dimensioned for detecting information from the at least one measurement object indicating at least one of optical density and color or spectral values of said at least one measurement object.

7. (canceled)

8. (currently amended) The scanning apparatus according to claim 7 6, wherein the measurement strip includes a linearly arranged chain of measurement fields thereon, said measurement fields having specific color density values.

9. (currently amended) The scanning apparatus according to claim 8, wherein for detection and scanning purpose, each measurement head is associated with at least one measurement section, which measurement section includes at least one of said measurement fields.

10. (original) The scanning apparatus according to claim 9, wherein each measurement section comprises two adjacent spaced apart measurement zones intervened by a narrow track.

11. (original) The scanning apparatus according to claim 10, wherein the measurement zones each have identically recurring sequences of color density values.

12. (original) The scanning apparatus according to claim 10, wherein each measurement zone has measurements fields of a same longitudinal dimension.

13. (original) The scanning apparatus according to claim 11, wherein each measurement zone has measurement fields of a same longitudinal dimension.

14. (original) The scanning apparatus according to claim 13, wherein each measurement zone includes a common number of measurement fields.

15. (original) The scanning apparatus according to claim 10, wherein each measurement zone has at least one minimum and one maximum color density value.

16. (currently amended) The scanning apparatus according to claim 10, wherein ~~at least one of said measurement fields comprises~~ the reference object comprises at least one of said measurement fields.

17. (currently amended) The scanning apparatus according to claim 7 6, wherein said measurement heads are arranged one after another along said coordinate direction, the measurement heads being moveable along said coordinate direction.

18. (original) The scanning apparatus according to claim 17, wherein the apparatus is disposed above a printing machine roll, the printing medium being carried on said roll.

19. (original) The scanning apparatus according to claim 17, further comprising a slide device, said measurement heads being carried on said slide device, said slide device being moveable translationally along said coordinate direction.

20. (original) The scanning apparatus according to claim 18, further comprising a slide device, said measurement heads being carried on said slide device, said slide device being moveable translationally along said coordinate direction.

21. (original) The scanning apparatus according to claim 19, wherein in progressive time with slide device translational movement, each measurement head scans a measurement section on said measurement strip associated with said each measurement head.

22. (original) The scanning apparatus according to claim 6, wherein the printing medium is carried on a printing roll, said apparatus further comprising an angle measurement transmitter carried on said printing roll for detecting an angle of rotation of said printing roll, said transmitter being electrically operatively connected to the apparatus.

23. (original) The scanning apparatus according to claim 22, further comprising a control electronics unit, said control electronics unit being operative to detect a current angle of rotation of said printing roll at detection of said reference object and trigger activation of apparatus scanning when a predicted angle-of-rotation increment relative to that at detection is reached.

24. (original) The scanning apparatus according to claim 22, further comprising a control electronics unit, said control electronics unit triggering activation of said scanning apparatus with a predicted time-delay signal, the time delay being functionally dependent on a predetermined distance between the reference object and the measurement object.